

Caltrans SRRA Development Project Update Valley Wells & C.V. Kane



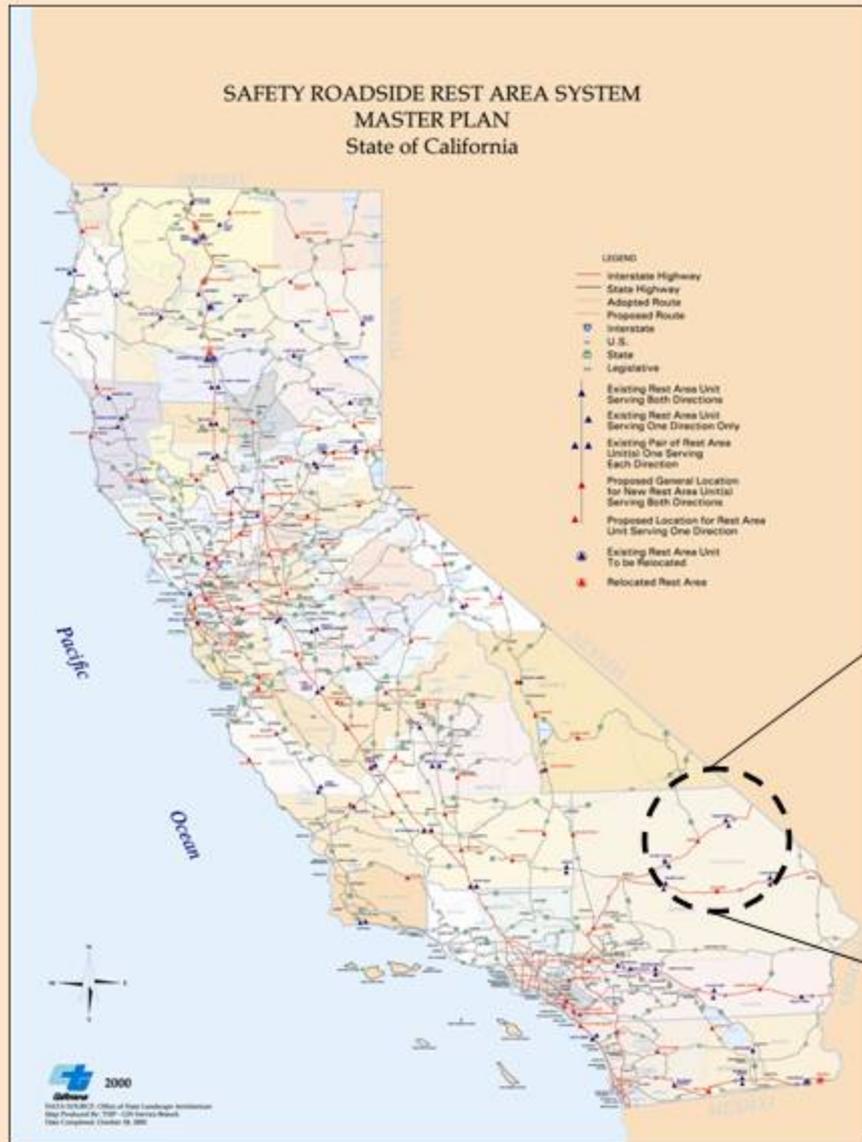
Desert Managers Group

August 27, 2009

San Diego, California

Safety Roadside Rest Area System Master Plan

Plan

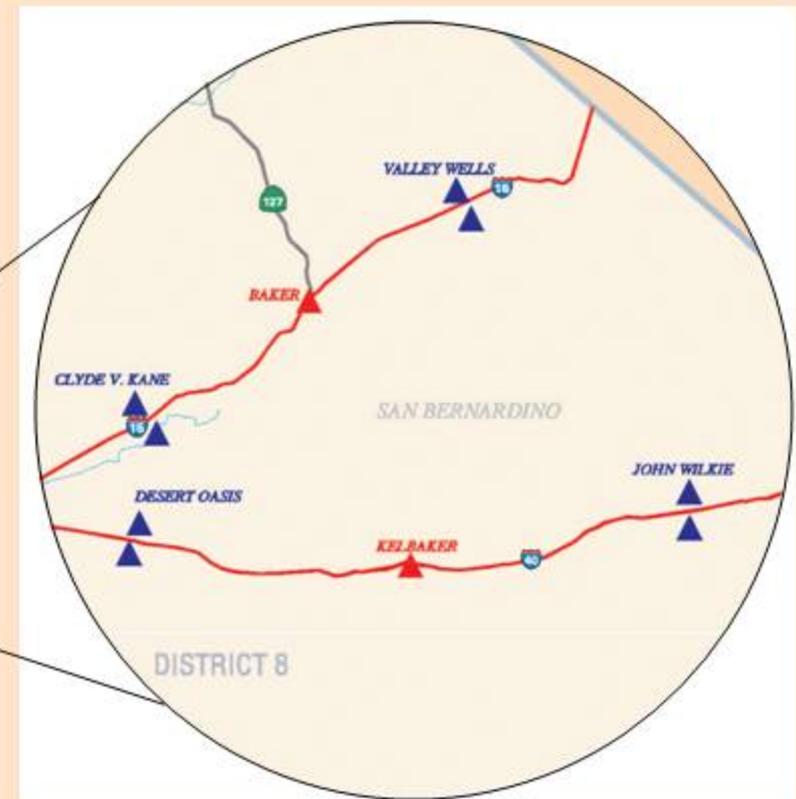


C.V. Kane

&

Valley Wells SRRA

50 miles distance



Valley Wells Project Update



Valley Wells SRRA

The Valley Wells Safety Roadside Rest Area project has upgraded both northbound and southbound facilities. The new Valley Wells SRRA was opened to the public April 2009. The first phase of the Valley Wells Upgrade included interpretive tiles inside the restrooms & sidewalk impressions.

The second phase of this project will complete the Interpretive Component of Valley Wells. The second phase is scheduled to be completed in 2010.



Valley Wells Interpretive Component

- This project will provide an interpretive center for both northbound and southbound Valley Wells Safety Roadside Rest Areas (SRRA).
- The proposed work will consist of constructing interior interpretive display facilities in the open area between the restrooms at both the northbound and southbound facilities. Work will also include construction of exterior displays along new desert discovery trails that will meander through the site (primarily southbound). The southbound rest area will act as a visitor center for those entering California.
- The interpretive center will concentrate on two categories:
 - Orientation Plaza: Includes 5 Vertical Panels (exhibits 1-5)
 - Desert discovery Trail with Interpretive Alcoves: Includes Alcoves w/ sign panels (exhibit 6-12), a windmill, creature footprints, cast concrete creatures, & petroglyphs.

Valley Wells Interpretive Exhibits 1-8

The following images are a few examples of the exhibits that will be included in the Valley Wells Interpretive Project.

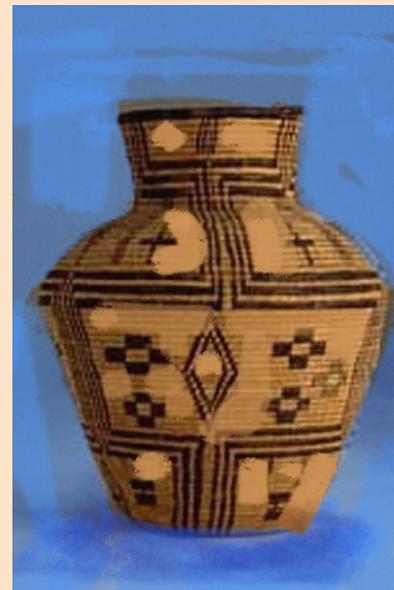
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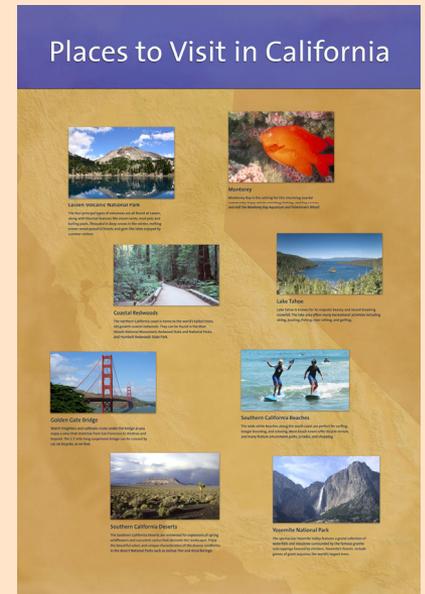
1A



1B



1C



1D



4A

Desert Recreation

4B



4C

Sites from Above

4D



5A

Safety First

Travel Safe in the Desert
A life-threatening emergency can quickly develop if you become stuck, lost, or injured. Be prepared.

Safety Checklist:

- Let someone know where you are going and when you plan to return.
- Take plenty of water. A minimum of one gallon per person per day, more if you are hiking in hot weather.
- Check tires and gas gauge before you leave the pavement.
- If you get lost, stay with your vehicle. It is easier to spot than a person.

Flash Floods
Bone-dry for much of the year, the California Desert can become suddenly awash in floodwaters. Watch for summer storms; their intense rains can flood roadways, and damage road surfaces. If you see water running across the road, don't attempt to drive across. Wait for a while, and flood waters quickly recede; or find an alternate route.

Leave No Trace, or better yet, Tread Lightly!
As you plan your adventure in the California Deserts, remember that many others are visiting as well. While your individual actions may seem not to matter much, they do when multiplied by the millions. When visiting wild lands, make it your goal to Leave No Trace (or Tread Lightly) of your passing. Find out more at www.lnt.org.

5B



5C

California Transportation

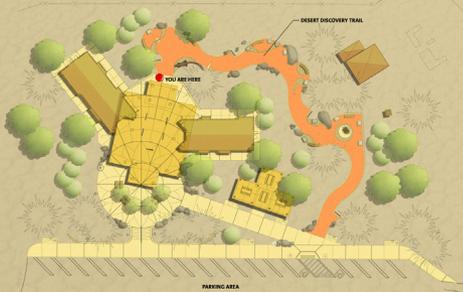
Participating Agencies

Participating Agencies
Bureau of Land Management
California State Parks
California Department of Transportation
County of San Bernardino
Desert Managers Group
National Park Service

5D

Welcome to the
**Desert
 Discovery Trail**

*Take a short walk, stretch your legs
 and learn about the Mojave Desert.*



The Mojave Desert is one of America's great desert regions, and is an area of exceptional biological diversity. This is a place where humans, plants, animals, weather and landscapes are in constant motion.

Water, or the lack of it, is the defining feature of a desert. Plants, animals and people have to adapt to this landscape. This rugged terrain contains elevations ranging from below sea level to over 11,000 feet, creating a diverse array of habitats.

There is evidence of 12,000 years of human presence in this region, including patterns of exploration and settlement by Native Americans and Western settlers. The Mojave Desert is a travel corridor with a rich history of linking different points across a harsh and forbidding landscape.

Please step lightly. Even though deserts are often viewed as empty wastelands, they are, in fact, fragile, arid ecosystems with diverse life forms that are easily impacted by human activities.

**Movement
 in the Desert**



Situated along the Colorado River the Mojave Indians traveled extensively to trade. Celebrated runners, they covered as many as 100 miles per day.

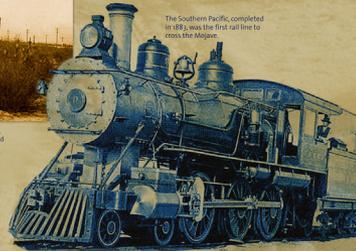
To cross the dry and rugged Mojave Desert, early inhabitants developed foot trails traveling from spring to spring. These trails evolved from footpaths to pack routes and then wagon roads as Euro-Americans entered the desert. Railroad routes strayed from the wagon roads in search of easier grades, and the first automobile roads followed the rail lines, as trains could be flagged down in an emergency.



Wagons share the road with automobiles near Lufkin, 1915. The road here was destined to become part of Route 66 ten years later.



As automobile travel became popular in the 1920s, the Automobile Club of Southern California created a uniform signing system, posting thousands of porcelain-on-steel signs.



The Southern Pacific, completed in 1882, was the first rail line to cross the Mojave.

Exhibit 7

**Hidden Riches
 in the Desert**



Desert tortoise

*How do Plants and
 Animals Survive Here?*

Sun, wind, and rain have continuously sculpted the Mojave Desert over time. Changing weather patterns dramatically influence how and where humans, animal and plant species are able to survive. Desert plants and animals have evolved and adapted to survive in this harsh environment.

There is an outstanding assortment of beautiful and ecologically important desert terrain in the Mojave. There are salt flats that bake in the 120 degree summer heat as well as dense stands of creosote plants, home to the endangered desert tortoise. Joshua tree forests flourish here and have come to symbolize the Mojave Desert. Forested mountaintops provide for outstanding views and backdrops in this diverse living desert.



Kelso dunes



Joshua tree forest



Beavertail cactus

Exhibit 8

Exhibit 6

Water and Deserts



Good rains can create vast fields of spring wildflowers in the desert. Many flowers are annuals, meaning they live only one season. Their seeds are dormant during dry years, but they can sprout very quickly when water is available.

Water, or more accurately the lack of water, is what defines a desert; these areas usually receives less than ten inches of rain per year while its evaporation exceeds ten inches. Average yearly rainfall in some areas of the Mojave Desert is as low as two to four inches. The now-abandoned community of Bagdad once went an incredible 767 days without rain! Desert temperatures tend to the extremes. It is often hot—the "World's Tallest Thermometer" in Baker records summer temperatures exceeding 120°—but it can be below freezing on winter nights.



Numerous factors combine to produce a desert. Global weather patterns, long distances from water sources and mountain blockades prevent moisture from reaching desert regions. The Mojave is one of four deserts in North America and is a transition between the hot Sonoran Desert to the south and the cold Great Basin Desert to the north. Factors such as sporadic seasonal rainfall patterns and low mountain ranges that block precipitation combine to create deserts.



Summer thunderstorms can turn dry streams into raging rivers that flow across desert roads, temporarily stopping traffic. Motorists should not cross these streams, which subside quickly making for a safe crossing. Campers are advised not to set-up in dry streambeds when stormy weather is predicted.



Groundwater is found beneath much of the Mojave Desert.



Groundwater is replenished by precipitation. Gravity causes groundwater to move through faults and cracks in the rock, which sometimes lead to the surface, creating springs, seeps, and ephemeral streams.



Groundwater quality and quantity is critical to the survival of desert plants and animals.



Seventy-five percent of the species in this region are associated with the streamside landscape.

Exhibit 9

Rugged and Beautiful



Desert sunflower

From the low-lying dry lakebeds to the tops of the many mountains, plant life changes in response to varying conditions. In low flatlands, creosote bush and white bursage flourish. Their small waxy leaves minimize evaporation. Further upslope, you will find yucca mixed with cactus such as barrel, prickly pear, and cholla. These succulents swell with stored water during rainy times. As you ascend further, dense Joshua trees forests thrive. Piñon pines and juniper are found at the higher elevations.



The crocote bush is a study in water conservation adaptations. The plants are widely spaced so that their roots don't compete for scarce water. Their root systems are wide spreading, to draw in groundwater from a large area. The crocote's mastery of the harsh desert environment is evident in its lifespan; one group of plants in the Mojave Desert is about 10,000 years old.



Joshua trees



Desert datura



Beaverdam Cactus



Agave

Exhibit 10

Animal Survival Strategies



Kit fox

The desert supports a surprisingly diverse assortment of animals adapted to thrive in this harsh environment. They have evolved adaptations that enable them to inhabit and survive in this harsh environment. Reptiles such as the leopard lizard and rattlesnakes have tough skin, which helps them to survive the harsh desert climate. Mule deer, coyote and bobcat seek shaded areas and avoid activity during the heat of day. Kangaroo rats and antelope ground squirrels burrow underground. Coyote, mountain lion, and gray fox have pale colored coats to reflect light and prevent them from overheating. Smaller-bodied jackrabbits and kit foxes have long ears and legs, to help dissipate heat. The feathers of hawks and roadrunners protect them from heat, cold and ultraviolet rays.



Jackrabbit



Coonhound



Mojave green rattlesnake



Kangaroo rat



Leopard lizard

DESERT TORTOISE



One of the most celebrated of the Mojave's reptiles, the desert tortoise is protected by federal and state laws. Tortoises feed on a variety of plants, including wildflower blossoms. The tortoise stores urine in its bladder, which allows it to maintain a water balance without drinking for many months. When frightened, the tortoise urinates to ward off the threat, leaving its stored water supply. Therefore, it is important not to pick up or disturb a desert tortoise.

DESERT BIGHORN SHEEP



With their massive spiral horns, desert bighorn sheep are perhaps the most majestic of the Mojave's mammals. These hard animals prefer rugged mountains where they traverse steep and precarious terrain with great agility. Their slow working digestive system allows them to feed on nutrient deficient plants.

Exhibit 11

Sculpted Landforms



Summer thunderstorms create rolling floods that rip down desert canyons carrying a slurry of soil and rock. At the canyon mouths, the waters spread out and slow down, dumping piles of sediment that will fill to the flatlands like an apron. These deposits are called bajadas. Now that you know what they are, you will see bajadas everywhere.

Our desert mountains are melting before your eyes. Over millions of years, erosion, primarily from water but also from wind, has sculpted a breathtaking landscape. With every rainstorm, more rocks and gravels are moved downhill, on each windy day, sands move, particle by particle, toward desert dunes. This is basin and range country, a pattern that stretches from eastern California to central Utah. A series of north-south trending faults have created corresponding mountains interspersed with big flat basins, which, unlike valleys, are not drained by rivers.



Spectacular limestone formations can be found at Mitchell Caverns. Water seeps through the rocks, eroding the limestone to form caves. Calcium laden water dripping in the caves deposits limestone drop by drop to form interior decorations. Tour Mitchell Caverns at Providence Mountains State Recreation Area.



Sand grains from Soda Dry Lake are transported by wind more than 100 miles to the Kelso Dunes, some of the tallest in North America. These are well known as "singing" or "howling dunes." When conditions are right, sand cascading down the dune slopes can create a low pitched sound.

Exhibit 12

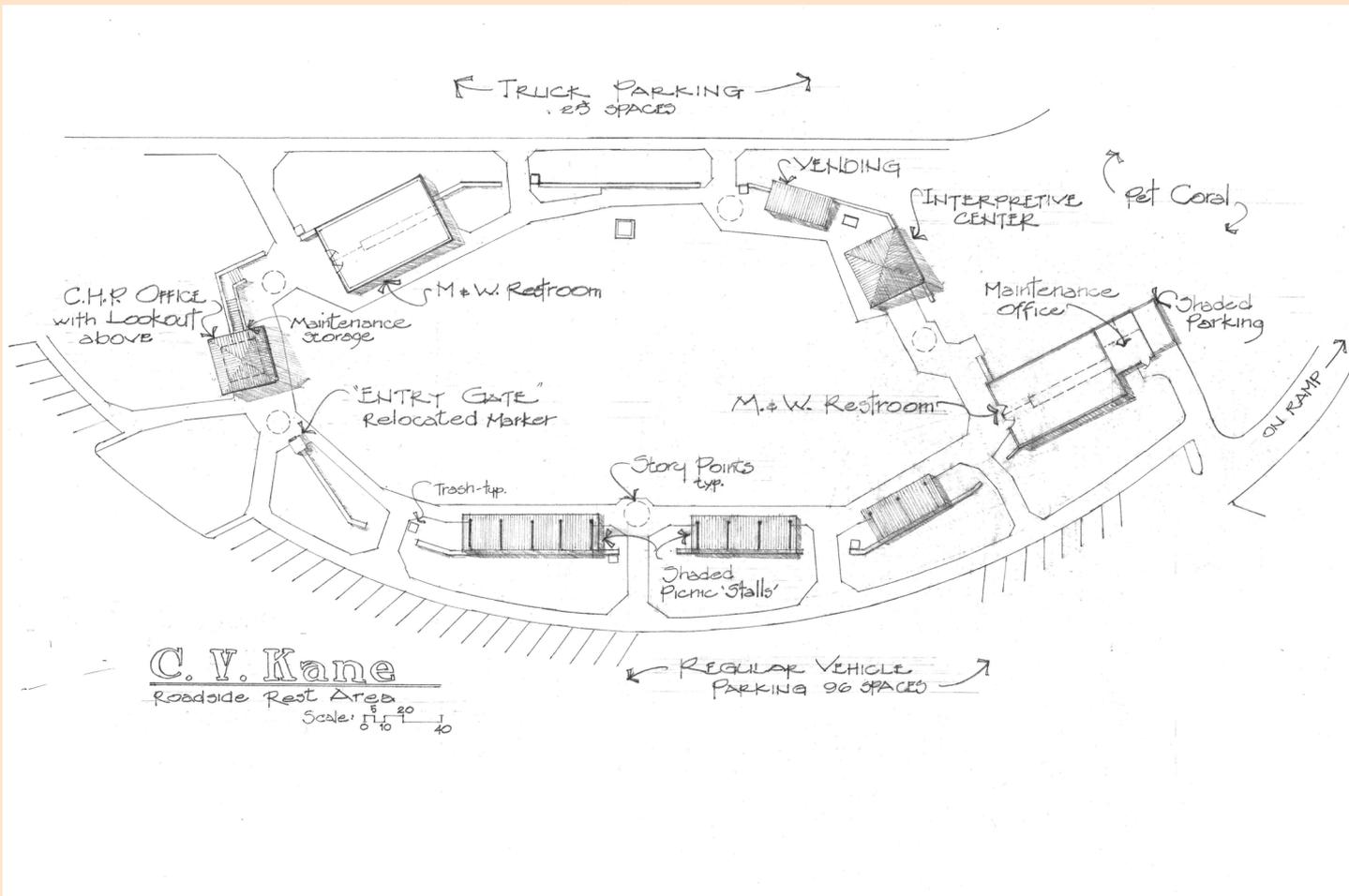
Clyde V. Kane Safety Roadside Rest Area



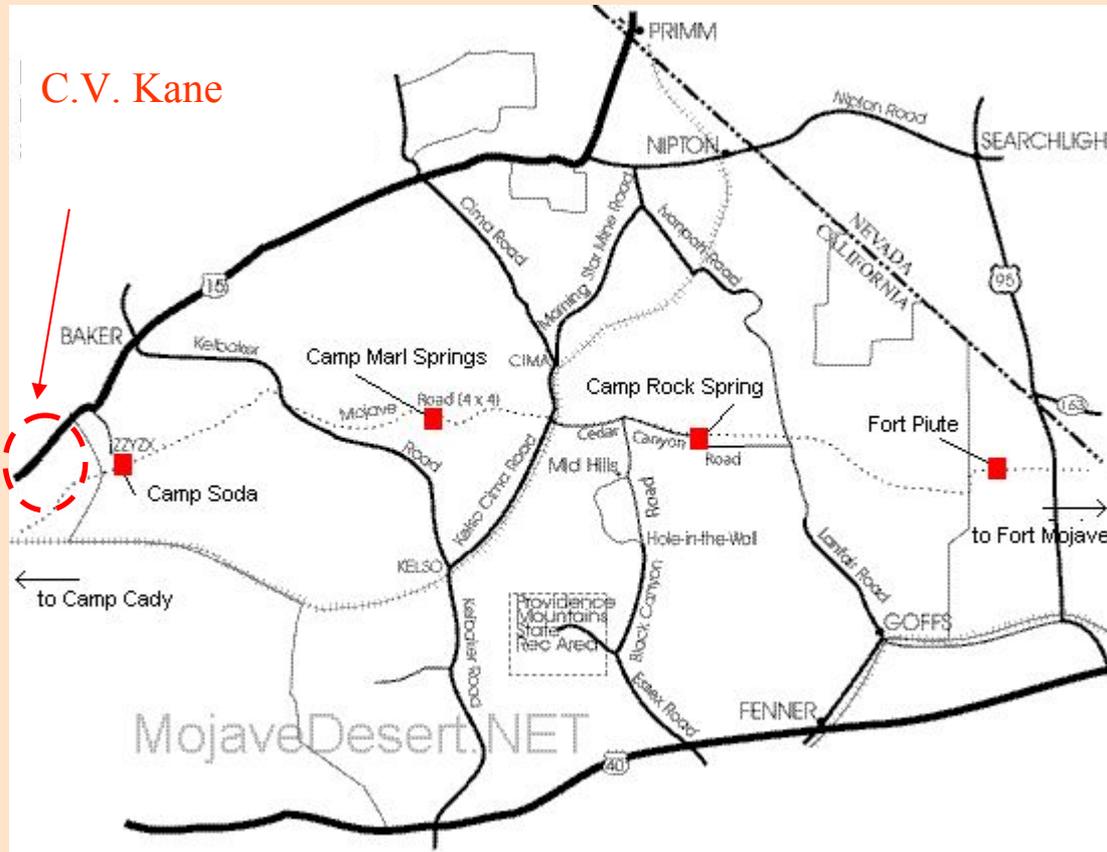
C.V. Kane Location Map



C.V. Kane Site Layout

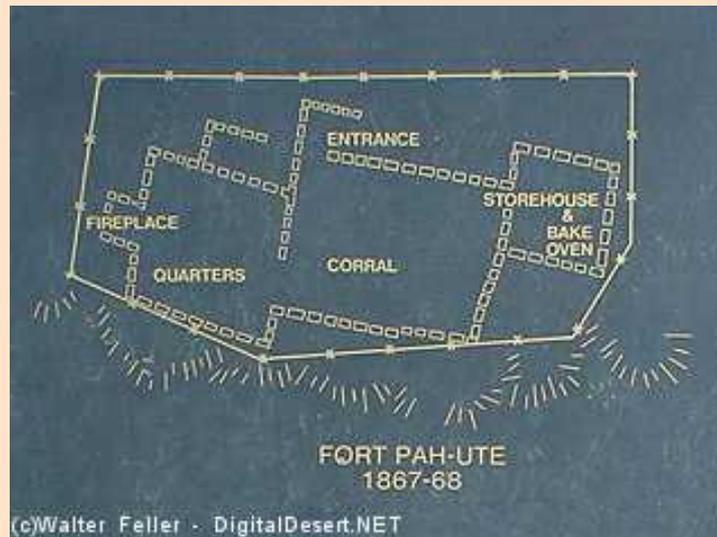
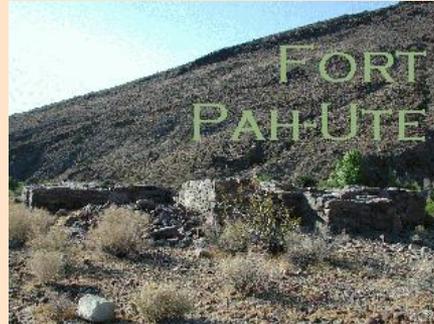


C.V. Kane, Fort Outposts & Mojave Road

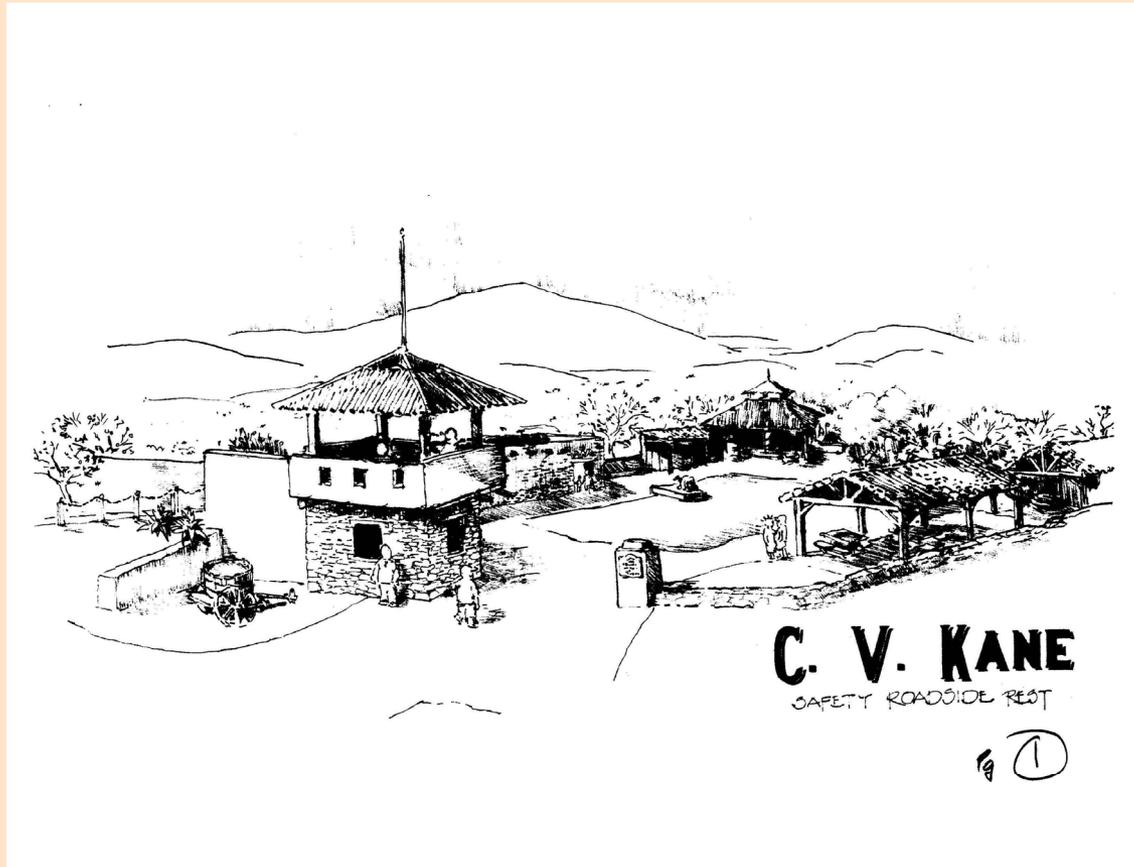


Location of C.V. Kane in relation to the Mojave Road and the Fort Outposts.

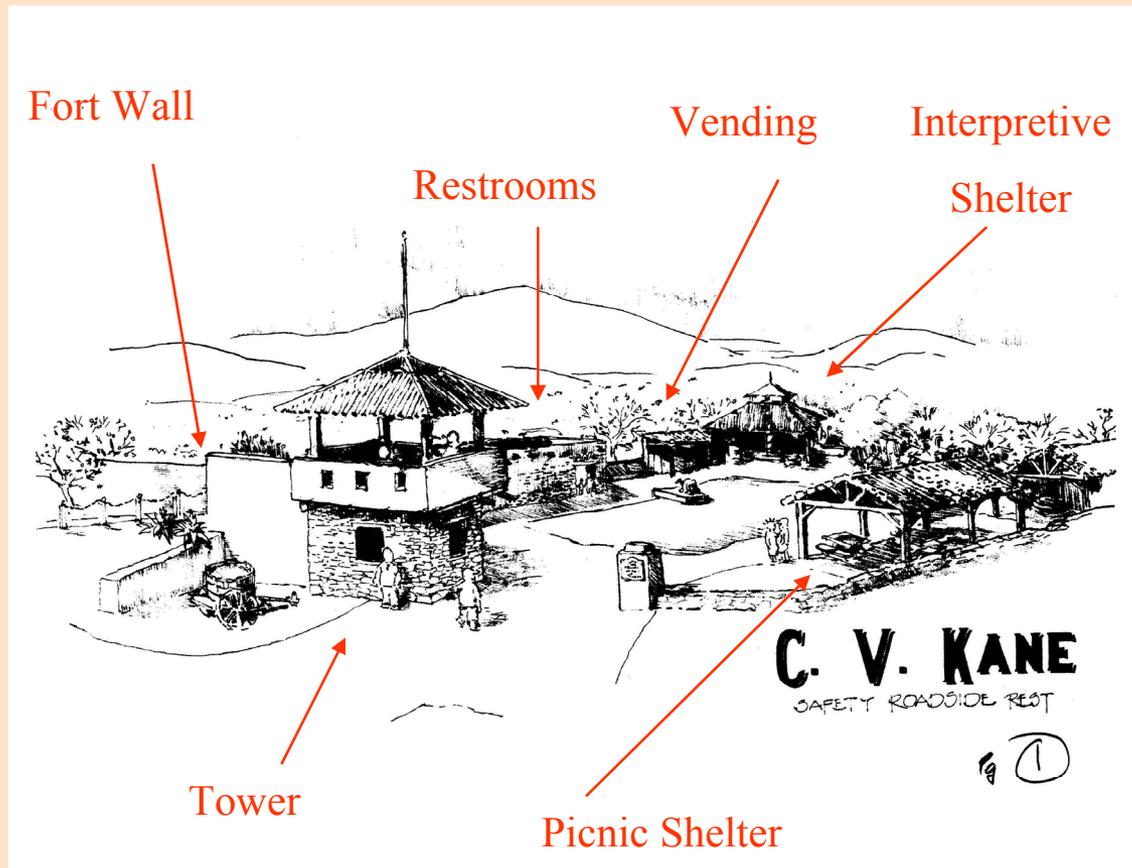
Fort Remnants



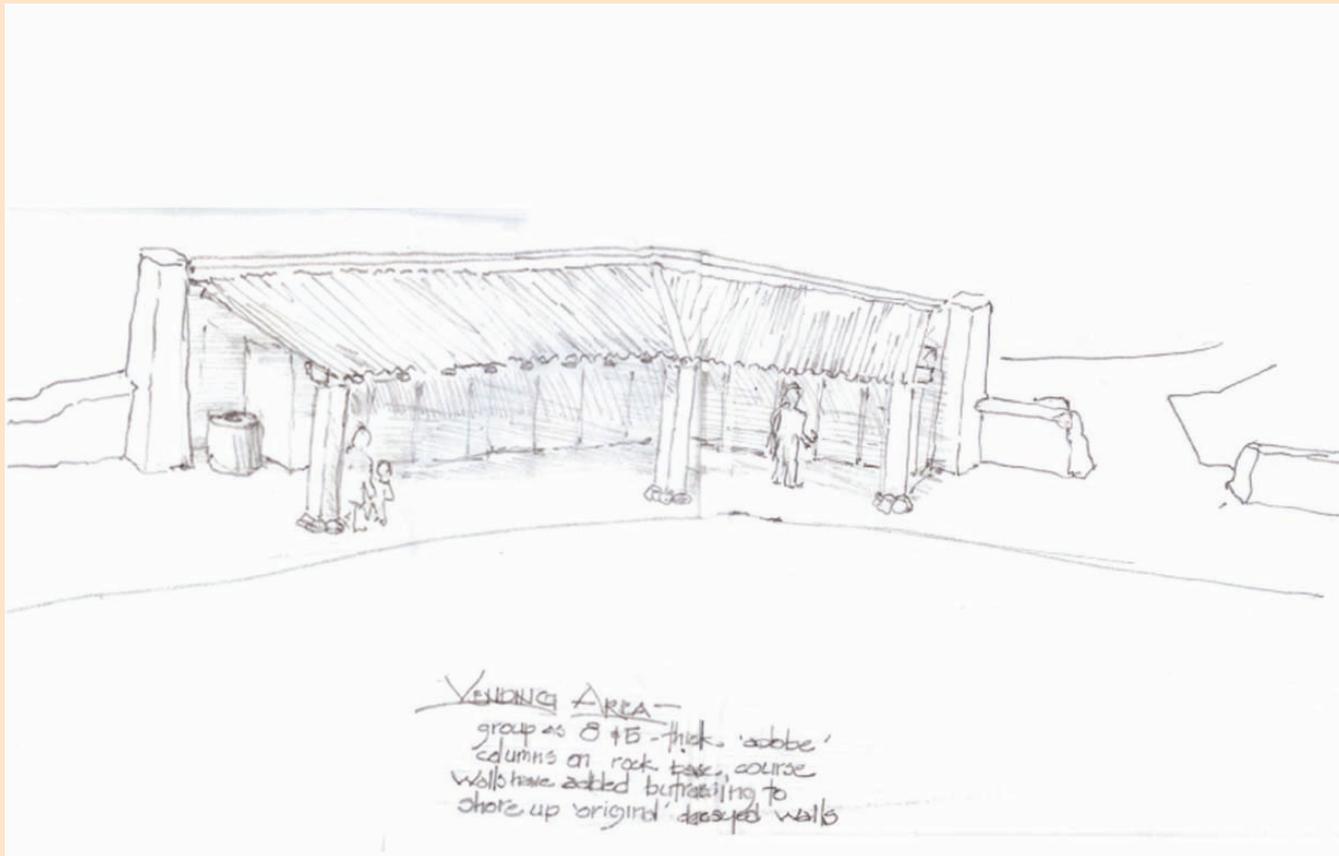
C.V. Kane Thematic Sketch



C.V. Kane Thematic Sketch



C.V. Kane Vending Sketch



C.V. Kane Restroom Sketch



C.V. Kane Restroom Sketch

